MITSUBISHI ELECTRIC

Changes for the Better

PROGRAMMABLE LOGIC CONTROLLERS

FX3 series CPU Catalog

Empowering Industries

A tradition in refining excellence.

Introducing the *FX3 series*…

The ground breaking *FX3 series* is the 3rd generation of compact controller produced by Mitsubishi Electric.
Coming from a heritage of pioneering compact controllers, the *FX3 series* continues to build on its cornerstone concepts:

Control systems that require minimum setup and keep program development time to a minimum.

FX3 series

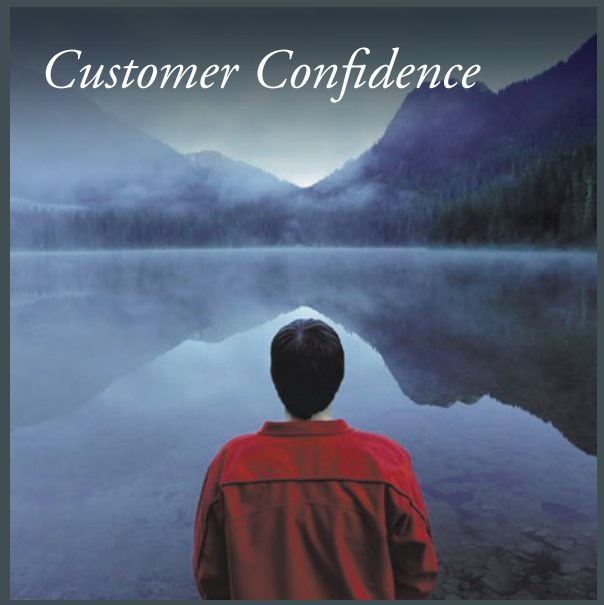
Flexible

A configurable design that permits open communication, large I/O handling, as well as precise positioning and analog control, creating systems that mold to customer requirements.

Affordable

A high performance to cost ratio makes economical design solutions for a diverse range of applications a reality.
These features combined with Mitsubishi Electric's legacy in quality and reliability ensures that the 3rd generation of controller will continue to be at the forefront of the compact PLC market and provide customers with a leading edge.

Customer Confidence



With a design philosophy spanning more than quarter of a century, a customer base spread across the globe, a host of industrial certifications and almost 9 million CPUs sold, the *FX3 series* continues to sustain its position as the compact PLC of choice.

All you ever need.

FX3 series control solutions

With superior built-in functionality and straightforward usability, the *FX series* meets the needs of a variety of user applications.

Serial Communication

Versatile serial communication of the *FX3 series* allows reliable data exchange with other products such as printers, barcode readers, modems, inverters, other PLCs and PCs. User defined communication as well as Modbus and FreqRol protocols are available.

Networking

Among the networks supported by the *FX3 series* are CC-Link, Ethernet, PROFIBUS-DP and CANopen. Together they provide a wide selection of solutions for interfacing to existing networks

Software

MELSOFT software provides scalable solutions for the entire range of Mitsubishi Electric automation products. PLC programming, screen design, and servo and network setup are just a few of the packages available for use with the *FX3 series*.

Positioning

Built-in high-speed pulse outputs and special instructions enable the *FX3 series* main units to control up to 3 independent axes of servo motion from the main unit itself. Through use of special function blocks, interpolated and networked servo control solutions are also available.

High Speed Control

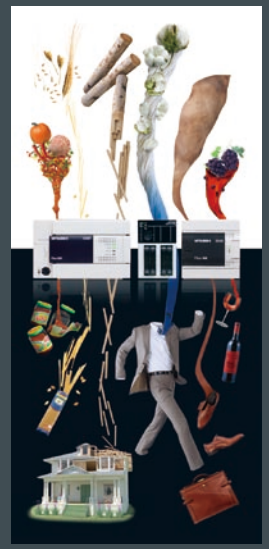
With 6 to 8 high speed counters on each model, the *FX3 series* is perfectly suited for applications in need of pulse-catch functions, closed-loop feedback processing, or high-speed sensor use.

Analog Control

The *FX3 series* features straightforward Analog to Digital and Digital to Analog control for all models, facilitated by an extensive range of Expansion Boards, Special Adapters, and Special Function Blocks.

Visualization

HMI options for the *FX3 series* range from simple text-based Display Units to advanced graphical touch screen displays, otherwise known as the GOT1000 series Graphic Operation Terminals.

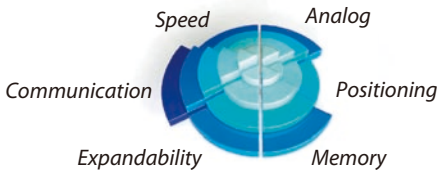


With superior built-in functionality and straightforward usability, the FX series meets the needs of a variety of user applications.

A basic 3rd generation compact PLC

Controllable I/O: 14 - 256 points
(With CC-Link remote I/O's)
(Main Unit I/O: 14/24/40/60 points)

- *3rd generation compact PLC*
- *Highly flexible*
- *Dual bus architecture*
- *Control of up to 128 directly connected I/O,or up to 256 I/O with CC-Link remote I/O's.*



FX3G

Customized Control

The FX3G is an introductory compact PLC and is the newest addition to the *FX3 series*, designed for simple yet performance-critical applications. Incorporating innovative *FX3 series* technology the customer is presented with a suite of benefits.

Product details
All in one CPU, power supply and I/O. Includes many upgraded features from the FX1N. Especially usage of the *FX3 series* ADP bus system and new expansion boards (BD).

Instruction Times
Basic Instructions: 0.21μs / instruction (Contact Instruction)

Large Memory
32,000 steps of built-in program memory.
EEPROM memory cassette with loader function is available.

Applicable Standards
All products support EN and UL/cUL

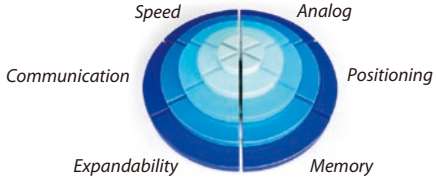
Large Device Memory

Auxiliary Relays	7,680 points
Timers	320 points
Counters	235 points
Data Registers	8,000 points
Extension registers	24,000 points
Extension file registers	24,000 points

Flagship model of the 3rd generation compact PLC

Controllable I/O: 16 - 384 points
(With CC-Link remote I/O's)
(Main Unit I/O: 16/32/48/64/80/128 points)

- *3rd generation compact PLC*
- *High efficiency with more speed, more performance, more memory, and new functions.*
- *Built-in high speed processing and positioning*
- *The FX3U can control a maximum of 256 connected I/O, and up to 384 points with CC-Link remote I/O's.*



FX3U

Top of the line

The FX3U is the original dual system-bus, high-speed, fully expandable compact PLC designed to seamlessly control communication, networking, analog, and positioning systems. With a maximum of 384 controllable local and networked I/O via CC-Link, the FX3U uses its power and flexibility to provide a solution for a variety of applications.

Product Details
All-in-one CPU, power supply and I/O. Includes many upgraded features from the FX2N, including high expandability using Expansion Boards and Special Adapters to add functionality.

Fast Instruction Times
Basic Instructions: 0.065µs / instruction (Contact Instruction)

Large Memory
64,000 steps of built-in program memory.
Flash Memory Cassettes with loader functionality also available

Applicable Standards
All products support EN and UL/cUL standards.
Various shipping approvals are supported as well.

Large Device Memory

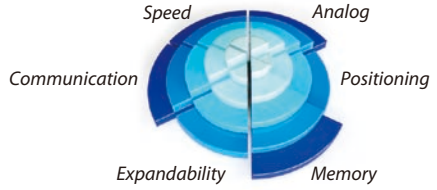
Auxiliary Relays	7,680 points
Timers	512 points
Counters	235 points
Data Registers	8,000 points
Extension Registers	32,768 points
Extension File Registers*	32,768 points

*With optional Memory Cassette

Slim fit model of the 3rd generation compact PLC

Controllable I/O: 16 - 384 points
(with CC-Link remote I/O's)
(Main Unit I/O: 16/32/64/96 points)

- *3rd generation Super-compact PLC*
- *Reduced size and wiring using connector-type I/O*
- *Built-in high speed processing and positioning*
- *Even with its ultra-compact size, the FX3UC can be expanded to locally control up to 256 I/O, and up to 384 points with CC-Link remote I/O's.*



FX3UC

Slim Fit

The FX3UC is the new ultra-compact high speed, fully expandable PLC. Based on 24V DC power and using connector-type transistor I/O, the FX3UC is designed for space conscious and modular applications. Created inline with the FX3U series, the FX3UC incorporates such attributes as built-in high speed I/O and the dual system-bus architecture, optimizing communication, networking, analog, and positioning control.

Product Details

Ultra-compact size main unit including many upgraded features from the FX2N / FX2NC, including high expandability using Special Adapters to add functionality.

Fast Instruction Times

Basic Instructions: 0.065µs / instruction (Contact Instruction)

Large Memory

64,000 steps of built-in program memory.
Flash Memory Cassettes with loader functionality also available

Applicable Standards

All products supports EN and UL/cUL

Large Device Memory

Auxiliary Relays	7,680 points
Timers	512 points
Counters	235 points
Data Registers	8,000 points
Extension Registers	32,768 points
Extension File Registers*	32,768 points

*With optional Memory Cassette

Visualization

GRAPHIC OPERATION TERMINAL GOT1000 The consistent approach to data visualization!

Industrial control panels are increasingly turning into multifunctional human-machine interfaces. They are now an integrated part of modern automation systems, displaying detailed information on plant and machine control operations, connecting to higher-level management systems and providing a wealth of helpful and supportive functions for machine and factory operation, monitoring and diagnostics. The GOT1000 family features 3 different series to provide the best fit of functionality for all kind of user requirements from the GT10 series, achieving affordability with basic functionality, up to the GT16 series, the all-in-one model, packed with all the solutions to meet the needs of demanding customers.

GOT1000 with FX Series PLCs

- Transparent Mode

- Back-up and Restore functionality with GT16

- List Editor (GT10/GT11 and GT16)

- Multi-Connection (GT10, GT11)

- No External Power Required (GT1020-L[]L(W) and GT1030-L[]L(W) 5V DC type)

- Common Software for ALL GOTs.

GT16

The all-in-one model

Multimedia | Video RGB | Network | Backup/restore | Serial

15-inch XGA TFT
GT1695M 65,536 colors

12.1-inch SVGA TFT
GT1685M 65,536 colors

10.4-inch SVGA VGA TFT
GT1675M 65,536 colors

8.4-inch SVGA VGA TFT
GT1665M 65,536 colors

GT11

Standard functions for demanding users 5.7-inch

Hand health | Scripting | Parts movement | System monitor

QVGA TFT
GT1155 256 colors

QVGA STN
GT1155 256 colors

QVGA STN
GT1150 16 gray scales

QVGA
Handy GOT/STN
GT1155HS 256 colors
GT1150HS 16 gray scales

The GT01-RS4-M is a multi-drop communication master unit for the GOT1000 series. Connected to the serial communication port of one PLC, it supports connection of up to 16 GOT1000 HMIs. The maximum total cable length of 500m allows HMIs to be placed at all locations where users require an interface to the machine, this provides more comfortable and safer machine usage even for larger machines. A free mix of connected GOT1000 terminals makes cost effective visualization a reality since only those GOTs with required functionality can be used.

GT10

Affordability with basic functionality

Multi language | Multi action switch | Recipe functions

5.7-inch QVGA STN
GT1055 256 colors
GT1050 16 blue scales

4.7-inch QVGA STN
GT1045 256 colors
GT1040 16 blue scales

4.5-inch STN GT1030
Monochrome Tricolor LED[Green/Orange/Red] [White/Pink/Red]
Black Frame / White Frame

3.7-inch STN GT1020
Monochrome Tricolor LED[Green/Orange/Red] [White/Pink/Red]
Black Frame / White Frame

Software

MELSOFT

In today's world, programming software for PLCs is a forever evolving process.
Customers place more focus on reusable program code and user friendly software that helps to reduce errors and programming time, and manage the programming process.

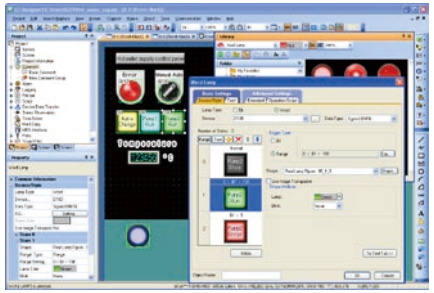
GT Works 3 → GT Simulator 2 → Communication/Monitoring ← GX Simulator ← GX Developer

Screen Design Software

GT Works 3

The all new GT Works 3 is the most advanced screen design environment.
Experience the dawn of new era in visualization design to quickly transform the front end of your machine into a more user friendly and sophisticated interface you need a design environment that is both intuitive and efficient.
GT Works 3 is the quintessential environment for visual design and configuration. User-oriented functions are integrated based on three main concepts - simplicity, definition and ease of use.
Screen development time is reduced up to 70% compared to other conventional HMI environments.*

* Compared to GT Designer 2 (based on our measurements)



Simulation packages

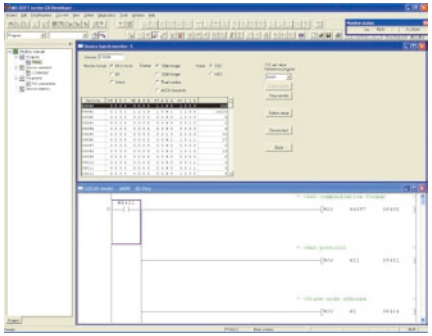
GX Simulator & GT Simulator 2

To save production cost, application designers are expected to reduce program development time.
In order to meet this challenge, Mitsubishi Electric has created simulation packages to help designers increase development efficiency.
GX Simulator and GT Simulator2 allow users to create a virtual PLC or GOT respectively on their PC. PLC code and GOT programs can be tested and any errors debugged without the need of hardware. GX Simulator and GT Simulator2 have been developed so they can operate simultaneously, allowing a complete application environment to be created within the user's PC.

Programming Software

GX Developer

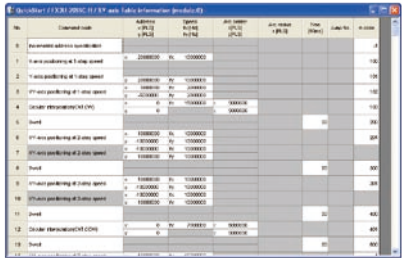
The key to any good software is that it is simple to use and intuitive. The GX Developer PLC programming package has achieved this by using a design that is easy to understand yet has access to powerful functions and tools. It also features help functions and an advanced communications setup utility, ensuring safe, reliable data transfer to and from the target PLC.
GX Developer has also been designed so that it can interface directly with other FX Programming packages, such as FX Configurator-FP and FX Configurator-EN, allowing customers to access different programs in a straightforward manner.

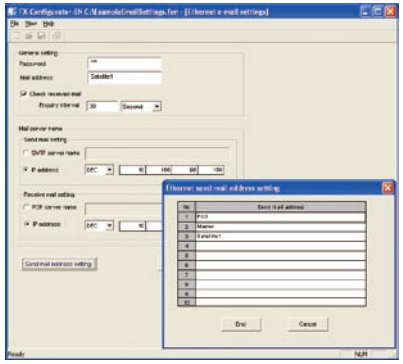


FX Programming Packages

FX Configurator-FP & FX Configurator-EN

When using the FX3U-20SSC-H positioning block, or the FX3U-ENET Ethernet module, these FX programming packages simplify special function block setup and enable dedicated monitoring and testing capabilities between the PC and the module. The FX Configurator-FP configures the FX3U-20SSC-H positioning unit, including the parameter of the connected servos and features extensive monitoring and testing functionalities. The FX Configurator-EN provides an easy setup environment for the FX3U-ENET Ethernet module. Both software packages can be launched independently or as helper applications from GX Developer, promoting PLC ladder and special function block operation integration.





Specifications

Environmental Specifications

General specifications	FX3G	FX3U	FX3UC
Ambient temperature	0 – 55 °C (storage temperature: -25 – +75 °C)	0 – 55 °C (storage temperature: -25 – +75 °C)	0 – 55 °C (storage temperature: -25 – +75 °C)
Noise durability	1000 Vpp with noise generator; 1 µs at 30 – 100 Hz	1000 Vpp with noise generator; 1 µs at 30 – 100 Hz	1000 Vpp with noise generator; 1 µs at 30 – 100 Hz
Dielectric withstand voltage	1500 V AC, 1 min./ DC PSU: 500 V AC, 1 min.	AC PSU: 1500 V AC, 1 min. / DC PSU: 500 V AC, 1 min.	500 V AC, 1 min.
Ambient relative humidity	5 – 95% (non-condensing)	5 – 95% (non-condensing)	5 – 95% (non-condensing)
Shock resistance	Complies to IEC 68-2-27: 147 m/s^2 (3 times each in 3 directions for 11 ms)	Complies to IEC 68-2-27: 15 G (3 times each in 3 directions for 11 ms)	Complies to IEC 68-2-27: 15 G(3 times each in 3 directions for 11 ms)
Vibration resistance	Complies to IEC 68-2-6: 9.8m/s^2 (resistance to vibrations from 57 – 150 Hz for 80 minutes along all 3 axes); 4.9m/s^2 for DIN rail mounting	Complies to IEC 68-2-6: 9.8m/s^2 (resistance to vibrations from 57 – 150 Hz for 80 minutes along all 3 axes); 4.9m/s^2 for DIN rail mounting	Complies to IEC 68-2-6: 9.8m/s^2 (resistance to vibrations from 57 – 150 Hz for 80 minutes along all 3 axes); 4.9m/s^2 for DIN rail mounting
Insulation resistance	500 V DC, 5 MΩ	500 V DC, 5 MΩ	500 V DC, 5 MΩ
Ground	Class D: Grounding resistance 100 Ω or less	Class D: Grounding resistance 100 Ω or less	Class D: Grounding resistance 100 Ω or less
Fuse	For FX3G-14M[] and FX3G-24M[] : AC:250V 1 A DC:250V 3.15A For FX3G-40M[] and FX3G-60M[] : 250V 3.15 A	From FX3U-16M[] to FX3U-32M[]: 250V 3.15 A From FX3U-48M[]to FX3U-128M[] : 250V 5 A	125V 3.15A
Environment	Avoid environments containing corrosive gases, install in a dust-free location.	Avoid environments containing corrosive gases, install in a dust-free location.	Avoid environments containing corrosive gases, install in a dust-free location.
Certifications	CE, UL/cUL	CE, UL/cUL, Ship approvals	CE, UL/cUL, Ship approvals

Electrical Specifications

Power Supply Specifications	FX3G		FX3U		FX3UC
	AC Powered Models (FX3G-[]M[]/ES/ESS)	DC Powered Models (FX3G-[]M[]/DS/DSS)	AC Powered Models (FX3U-[]M[]/ES/ESS)	DC Powered Models (FX3U-[]M[]/DS/DSS)	
Power supply	100–240 V AC (+10 % / -15 %), 50/60 Hz	24 V DC (+20 % / -15 %)	100–240 V AC (+10 % / -15 %), 50/60 Hz	24 V DC (+20% / -30 %)	24 V DC (+20% / -15 %)Ripple Voltage (p-p)5% or less
Inrush current at ON	30 A / <5 ms (at 100 V AC) 50 A / <5 ms (at 200 V AC)	30A / < 1ms (at 24V DC)	30 A / <5 ms (at 100 V AC) 65 A / <5 ms (at 200 V AC)	35 A / <0.5 ms (at 24 V DC)	30A / < 0.5ms (at 24V DC)
Allowable momentary power failure time	10 ms	5 ms	10 ms	5 ms	5 ms
24V DC service power supply	400 mA	—	FX3U-16/32MR/ES: 400 mA / FX3U-48/64/80/128MR/ES: 600 mA	—	—

Output Specifications			FX3G		FX3U		FX3UC
			Relay Models	Transistor Models	Relay Models	Transistor Models	Transistor Models
Switching voltage (max.)		V	<240 V AC, <30 V DC	5–30 V DC	<240 V AC, <30 V DC	5–30 V DC	5–30 V DC
Max. output current	- per output	A	2	0.5	2	0.5	0.3A (Y0 - Y3), and 0.1A (Y4 or higher)
	- per group*	A	8	0.8	8	0.8	0.8
Max. switching current	- inductive load		80VA	12W	80VA	12W	12W(7.2W per point for Y0 - Y3 and 2.4W per point for Y4 or higher)
Response time		ms	10	< 0.2 (< 5µs for Y0,Y1)****	10	< 0.2 (< 5µs for Y0–Y2)	< 0.2 (< 5µs for Y0 - Y2)
Life of contacts (switching times)			3,000,000 at 20VA; 1,000,000 at 35VA;200,000 at 80VA**	—	3,000,000 at 20VA; 1,000,000 at 35VA;200,000 at 80VA**	—	—***

* This limitation applies to the maximum output current for each reference terminal (Common), each serving 1 to 4 relay or transistor outputs. Please observe the reference terminal assignments for group identification.

** Not guaranteed by Mitsubishi Electric.
*** Refer to the specifications of the Terminal Block being used.
**** The 40 and 60 I/O pints main units supports 5 micro seconds for Y2.

Mitsubishi Electric Corporation Himeji Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001(standards for quality assurance management systems)

Programming Specifications

System specifications	FX3G	FX3U	FX3UC
I/O points	256 total (combined local and CC-Link remote I/O)	384 total (combined local and CC-Link remote I/O)	384 total (combined local and CC-Link remote I/O)
Address range	Max. 128 direct addressing andMax. 128 remote I/O	Max. 256 direct addressing andMax. 256 remote I/O	Max. 256 direct addressing andMax. 256 remote I/O
Program memory	32,000 steps EEPROM (internal), exchangeable EEPROM memory cassette	64,000 steps RAM (internal), exchangeable FLROM memory cassette	64,000 steps RAM (internal), exchangeable FLROM memory cassette
Instruction Time	0.21 µs or 0.42 µs / contact instruction	0.065 µs / contact instruction	0.065 µs / contact instruction
Number of instructions	29 sequence instructions, 2 step ladder instructions,131 applied instructions	29 sequence instructions, 2 step ladder instructions,225 applied instructions	29 sequence instructions, 2 step ladder instructions,225 applied instructions
Programming language	Step ladder, instruction list, SFC	Step ladder, instruction list, SFC	Step ladder, instruction list, SFC
Program execution	Cyclical execution, refresh mode processing	Cyclical execution, refresh mode processing	Cyclical execution, refresh mode processing
Program protection	2 different keywords, maximum password length 16 characters	2 different keywords, maximum password length 16 characters	2 different keywords, maximum password length 16 characters

System specifications	FX3G	FX3U	FX3UC
Auxiliary relays	7,680 total, with 384 general (M0 - M383), 1152 EEPROM latched (M384 - M1535), and 6,144 general/optional latched(M1536 - M7679)	7,680 total, with 500 general (M0 - M499), 524 optional latched (M500 - M1023), and 6,656 latched (M1024 - M7679)	7,680 total, with 500 general (M0 - M499), 524 optional latched (M500 - M1023), and 6,656 latched (M1024 - M7679)
Special auxiliary relays	512 (M8000 - M8511)	512 (M8000 - M8511)	512 (M8000 - M8511)
State relays	4,096 total, with 1,000 EEPROM latched (S0 - S999) and 3,096 general/optional latched (S1000 - S4095)	4,096 total, with 1,000 optional latched (S0 - S999) and 3,096 latched (S1000 - S4095)	4,096 total, with 1,000 optional latched (S0 - S999) and 3,096 latched (S1000 - S4095)
Timers	320 total, with 206 100ms(T0 - T199 and T250 - T255), 46 10ms (T200 - T245),and 68 1ms (T246 - T249 and T256 - T319)	512 total, with 206 100ms(T0 - T191, T192 - T199 and T250 - T255), 46 10ms (T200 - T245),and 260 1ms (T246 - T249 and T256 - T511)	512 total, with 206 100ms(T0 - T191, T192 - T199 and T250 - T255), 46 10ms (T200 - T245),and 260 1ms (T246 - T249 and T256 - T511)
Counters	235 total (16-bit and 32-bit),with 36 general (C0 - C16 and C200 - C219) and 199 EEPROM latched (C16 - C199 and C220 - C234)	235 total (16-bit and 32-bit),with 120 general (C0 - C99 and C200 - C219) and 115 latched (C100 - C199 and C220 - C234)	235 total (16-bit and 32-bit),with 120 general (C0 - C99 and C200 - C219) and 115 latched (C100 - C199 and C220 - C234)
High-speed counters	21 total, with 16 1-phase (C235 - C250)and 5 2-phase (C251 - C255)	21 total, with 16 1-phase (C235 - C250)and 5 2-phase (C251 - C255)	21 total, with 16 1-phase (C235 - C250)and 5 2-phase (C251 - C255)
High-speed counter speed	1 phase, 6 points max: 60 kHz / 4 points 10 kHz / 2 points 2 phase, 3 points max: 30 kHz / 2 points 5kHz / 1points	1 phase, 8 points max: 100 kHz / 6 points 10 kHz / 2 points 2 phase, 2 points max: 50 kHz / 2 points	1 phase, 8 points max: 100 kHz / 6 points 10 kHz / 2 points 2 phase, 2 points max: 50 kHz / 2 points
Real-time clock	Year, month, day, hour, minute, second,day of the week	Year, month, day, hour, minute, second,day of the week	Year, month, day, hour, minute, second, day of the week
Data registers	8,000 total, with 128 general (D0 - D127),972 EEPROM latched (D128 - D1099), and 6,900 general/optional latched (D1100 - D7999)	8,000 total, with 200 general (D0 - D199),312 optional latched (D200 - D511), and 7,488 latched (D512 - D7999)	8,000 total, with 200 general (D0 - D199),312 optional latched (D200 - D511), and 7,488 latched (D512 - D7999)
Extension registers	24,000(R0~R23999)	32,768(R0~R32767)	32,768(R0~R32767)
Extension file registers	24,000(ER0~R23999) internal/optional memory	32,768(ER0~R32767) optional memory	32,768(ER0~R32767) optional memory
Index registers	16	16	16
Special data registers	512 (D8000 - D8511)	512 (D8000 - D8511)	512 (D8000 - D8511)
Pointers	2,048	4,096	4,096
Nestings	8	8	8
Interrupt inputs	6	6	6
Constants	16-bit: K: -32,768 to +32,767; H: 0 to FFFF; 32-bit: K: -2,147,483,648 to +2,147,483,647;H: 0 to FFFF FFFF	16-bit: K: -32,767 to +32,76; H: 0 to FFFF; 32-bit: K: -2,147,483,648 to +2,147,483,647;H: 0 to FFFF FFFF	16-bit: K: -32,768 to +32,767; H: 0 to FFFF; 32-bit: K: -2,147,483,648 to +2,147,483,647;H: 0 to FFFF FFFF

The company names and product names mentioned abone are trademarks or registered trademarks of each company. Some photographs are reserved by ©Renata Osinska ©Alexander Yakovlev ©Orlando Florin Rosu ©i love images ©Harald Soehngen -Fotolia.com

Global Partner. Local Friend.

Worldwide Mitsubishi Electric Sales Offices

Australia **Mitsubishi Electric Australia Pty. Ltd.**
348 Victoria Road, Rydalmere, N.S.W
2116,Australia
Tel: +61-2-9684-7777

Brazil **MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda.**
Rua Correia Dias, 184, Edificio Paraiso Trade Center-8 ander Paraiso, Sao Paulo, SP Brasil
Tel: +55 -11-5511-3146-2200

China **Mitsubishi Electric Automation (Shanghai) Ltd.**
17/F., ChuangXing Financial Center, No.288 West Nanjing Road, Shanghai, 200003, P.R.C
Tel: +86 (21) 2322-3030

Czech **Mitsubishi Electric Europe B.V. – o.s. Czech Branch**
Radlická 714/113a 158 00 Praha 5 Czech Republic
Tel: +420 251 551 470

France **Mitsubishi Electric Europe B.V. French Branch**
25 , Boulevard des Bouvets, F-927 41 Nanterre Cedex, France
Tel: +33-1-55 6855 68

Germany **Mitsubishi Electric Europe B.V. German Branch**
Gothaer Strasse 8 D-40880 Ratingen, GERMANY
Tel: +49-2102-486-0

India **Messung Systems Pvt. Ltd.**
Electronic Sadan NO:III Unit No15, M.I.D.C. Bhosari, Pune-411026, India
Tel: +91-20-27 12-3130

Indonesia **P.T. Autoteknindo SUMBER MAKMUR**
Murara Karang Selatan, Block A/ Utara No.1 Kav. No.11 Kawasan Industri Pergudangan, Jakarta - Utara 14440, P.O. Box 5045 Jakarta, 11050 Indonesia
Tel: +62-21-6630833

Ireland **Mitsubishi Electric Europe B.V. Irish Branch**
Westgate Business Park, Ballymount IRL-Dublin 24
Tel: + 353 1 / 4198800

Italy **Mitsubishi Electric Europe B.V. Italian Branch**
Centro Dir. Colleoni, Pal. Perseo-Ingr.2 Via Paracelso 12, I-20041 Agrate Brianza Milano, Italy
Tel: +39-039-6053-1

Korea **Mitsubishi Electric Automation Korea Co., Ltd.**
1480-6, Gayang-dong, Gangseo-ku Seoul 157 -200, Korea
Tel: +82-2-3660-9552

Poland **Mitsubishi Electric Europe B.V. Polish Branch**
ul. Krakowska 50 32-083 Balice, Poland
Tel: +48 12 630 47 00

Russia **Mitsubishi Electric Europe B.V.**
Moscow Representative Office 52 /5, Kosmodamianskaya. nab., 115054, Moscow, Russia
Tel: +7-812-633-3497

Singapore **Mitsubishi Electric Asia Pte, Ltd.**
307 Alexandra Road #05-01/02 Mitsubishi
Tel: +65-6470-2460

South Africa **Circuit Breaker Industries Ltd.**
Private Bag 2016, ZA-1600 Isando, South Africa
Tel: +27 -11-92 8-2000

Spain **Mitsubishi Electric Europe B.V. Spanish Branch**
Carretera de Rubi 76-80, E-08190 Sant Cugat del Valles, Barcelona, Spain
Tel.: +34-93-565-3131

Taiwan **Setsuyo Enterprise Co., Ltd.**
6F No.105 Wu Kung 3rd RD, Wu-Ku Hsiang, Taipei Hsien, Taiwan
Tel: +886-2-2299 -2499

Thailand **Mitsubishi Electric Automation (Thailand) Co., Ltd.**
Bang-Chan Industrial Estate No.111 Moo 4, Serithai Rd, T.Kannayao, A.Kannayao, Bangkok 10230 Thailand
Tel: +66-2-517-1326

U.K. **Mitsubishi Electric Europe B.V. UK Branch**
Travellers Lane, Hatfield, Hertfordshire., AL10 8XB, U.K.
Tel: +44-1707-27 6100

U.S.A. **Mitsubishi Electric Automation, Inc.**
500 Corporate Woods Parkway, Vernon Hills, IL60061, U.S.A.
Tel: +1-847-478-2100

Head Office: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
http://Global.MitsubishiElectric.com

© Jan. 2010 /// Printed in Japan /// Specifications subject to change without notice

HIME-C009-B0910 Printed in Japan(MEE)